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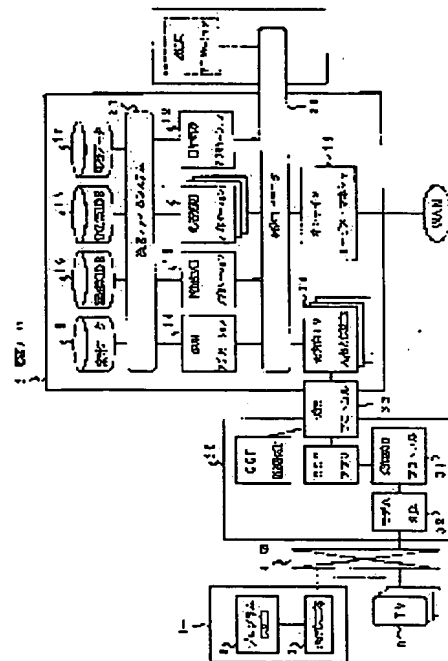
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## (54) TWO-WAY TELEVISION SYSTEM AND BIDIRECTIONAL TELEVISION RESPONSE SERVER SYSTEM

(57)Abstract:

**PROBLEM TO BE SOLVED:** To perform the sum-up processing of response data selectively inputted by viewers on two-way televisions corresponding to program contents and to provide a summed-up result to a broadcasting station or the like requiring it.

**SOLUTION:** The plural two-way televisions 1 are connected through a communication channel network 4 and the response data of the viewers to a sub program provided on the bidirectional televisions 1 are processed corresponding to the program contents. This system is provided with a response processing means 11 for arranging the response data sent from the respective bidirectional televisions 1 for respective programs and preparing a response data list, a response data storage part 17 for storing the response data list prepared in the response processing means 11 and a sum-up processing means 12 for taking out the response data list from the response data storage part 17 and obtaining the summed-up result of the response data for the respective programs.



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**CLAIMS**

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**[Claim(s)]**

[Claim 1] In the both-directions television response server system which processes the response data of the viewer to the program which two or more both-directions television is connected through a communication line network, and is sponsored on the aforementioned both-directions television according to the content of a program A response processing means to arrange the response data sent through a communication line network from each aforementioned both-directions television for every program, and to create a response data list, The both-directions television response server system characterized by providing a total processing means to obtain the total result of the response data for every program from the response data list created with the aforementioned response processing means.

[Claim 2] In the both-directions television response server system which processes the response data of the viewer to the program which two or more both-directions television is connected through a communication line network, and is sponsored on the aforementioned both-directions television according to the content of a program The program information database which registered the program information which defines program ID for every program and includes the content of processing of response data, A response processing means to arrange the response data with which program ID sent from each aforementioned both-directions television was added per program ID, and to create the list of response data, The both-directions television response server system characterized by providing a total processing means to process from the content of processing which searched the response data list created with the aforementioned response processing means from the aforementioned program information database based on program ID, and to obtain a total result.

[Claim 3] In the both-directions television response server system which processes the response data of the viewer to the program which two or more both-directions television is connected through a communication line network, and is sponsored on the aforementioned both-directions television according to the content of a program The program information database which registered the program information which defines program ID for every program and includes the content of processing of response data, The authentication information database with which each people's authentication information was registered based on television ID defined for every both-directions television, A response processing means to create the response data list to which arranged the response data with which program ID and television ID which are sent from each aforementioned both-directions television were added per program ID, and response data and television ID were made to correspond, An authentication processing means to search the aforementioned authentication information database based on television ID registered into the aforementioned response data list, and to acquire an individual authentication information, The both-directions television response server system characterized by providing a total processing means to process the aforementioned response data list and an individual authentication information according to the content of processing which searched the aforementioned program information database based on program ID, and to obtain a total result.

[Claim 4] In the both-directions television response server system which processes the response data of the viewer to the program which two or more both-directions television is connected through a communication line network, and is sponsored on the aforementioned both-directions television according to the content of a program A communications control means to hold the communication line

between these both-directions television if it is the HDR which analyzes the HDR added to the data sent through a communication line network from the aforementioned both-directions television, and demands two-way communication, While a program is sponsored on the aforementioned both-directions television through the communication line which the aforementioned communications control means holds The both-directions television response server system characterized by providing a program offer means to accumulate the response data sent from the aforementioned both-directions television through the aforementioned communication line to this program, and to execute business according to this program.

[Claim 5] VTR equipment which reproduces the video signal by which the script which offers the additional information of goods was inserted in the predetermined field of the video signal which shows the content of goods, The television receiving set which receives the television Hertzian wave for a broadcast and displays a program, It is a both-directions television system with the bidirection built from the response server by which a line connection is carried out to this television receiving set through a public line. for the aforementioned television receiving set The video reception function to receive the video signal delivered from the aforementioned VTR equipment, The function which discriminates from a script from the video signal which the aforementioned reception function received, The remote-operation reception function to receive the signal transmitted from the remote-operation machine, and the function to judge the content of designation of the signal received by the remote-operation reception function, When the signal from a remote-operation machine is judged to have demanded offer of additional information, It has the script execution function which carries out response \*\*\*\*\* circuit sending out of the transfer data corresponding to the additional information which performs the script from which it discriminated and was chosen with an identifier peculiar to a receiving set or a user individual. The database with which the personal information for a receiving set or a user individual was registered into the aforementioned response server, The function which takes out the identifier of a receiving set or a user individual from the transfer data sent from the aforementioned television receiving set, The television system characterized by having the function to take out a personal information from the aforementioned authentication information database based on the identifier taken out from transfer data, and to perform predetermined processing.

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Field

[0001] } [The technical field to which invention belongs] this invention relates to the both-directions television system and both-directions television response server system which carry out total processing of the response data of the viewer to the program with which both-directions television is provided, and offer various services.

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Technique

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0002} [Description of the Prior Art] In the field of the television broadcasting on which a television picture is displayed in response to a broadcast Hertzian wave with a television receiver while a broadcast Hertzian wave is transmitted from a broadcasting station, teletext is performed using the opening between the vertical-retrace-line terms of a television video signal. Teletext multiplexes and transmits many programs to a broadcast Hertzian wave, carries out the selection reception of the program required of a receiving side, and is made to change and display it on a television video signal.

[0003] In addition to usual television broadcasting, by using the technique of such teletext, a televiewer can be arbitrarily provided with many character programs or the program by the dynamic image. For example, the explanation of goods by which the commercial broadcast is carried out in a certain program, the purchase technique, etc. can be offered in other programs related to the program.

[0004] However, since it provided the target with the information from the broadcasting station on the other hand to the televiewer, the present television broadcasting did not display alternatively the supplementary information on goods for which a televiewer wishes out of two or more goods introduced, for example within the program, or did not perform appeal to a televiewer in the program, was not able to total the response from the televiewer to it on real time, and was not able to perform employment of making it reflected in a program.

[0005] On the other hand, recently, it is beginning to observe as one gestalt of an information service of implementation of a both-directions TV broadcast of a multimedia age. However, although carried out also in present television broadcasting about TV shopping using the teletext, for example, receiving the response from a televiewer was not completed.

[0006] Here, in addition to the function which can broadcast a TV program in response to the broadcast Hertzian wave from a broadcasting station, both-directions TV means the thing with the send-data function to receive and transmit the response (for it to have inputted) data which the televiewer who is watching the program returned to the television receiving set.

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TECHNICAL PROBLEM

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0007 } [Problem(s) to be Solved by the Invention] Thus, in the conventional television broadcasting, when it was going to obtain the order from a televiewer, and the reply by the TV shopping program, the quiz show, etc., the present condition was that a televiewer telephones himself and is performing the order and the reply after all.

[0008] this invention was made in view of the above actual condition, and aims at offering the both-directions television response server system which can be offered to the broadcasting station where a televiewer does total processing of the response data which carry out a selection input according to the content of a program, and needs the concerned total result on both-directions television.

[0009] this invention aims at offering the both-directions television system which can offer the service which displayed the additional information of goods on the television receiving set which displayed the video signal reproduced with VTR equipment, and followed additional information.

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MEANS

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[0010] } [Means for Solving the Problem] this invention provided the following meanses, in order to attain the above-mentioned purpose.

[0011] Both-directions television of a plurality [ this invention / corresponding to a claim 1 ] is connected through a communication line network. In the both-directions television response server system which processes the response data of the televiwer to the program currently sponsored on the aforementioned both-directions television according to the content of a program It has a response processing means to arrange the response data sent through a communication line network from each aforementioned both-directions television for every program, and to create a response data list, and a total processing means to obtain the total result of the response data for every program from the response data list created with the aforementioned response processing means.

[0012] According to this invention, the response data of the televiwer to the program currently sponsored on both-directions television are sent to the concerned both-directions television response server system through a communication line network. In a both-directions television response server system, the response data list which arranged response data for every program by the response processing means is created. Statistics processing of the response data list is carried out by the total processing means, and the total result of response data is searched for for every program.

[0013] Both-directions television of a plurality [ this invention / corresponding to a claim 2 ] is connected through a communication line network. In the both-directions television response server system which processes the response data of the televiwer to the program currently sponsored on the aforementioned both-directions television according to the content of a program The program information database which registered the program information which defines program ID for every program and includes the content of processing of response data, A response processing means to arrange the response data with which program ID sent from each aforementioned both-directions television was added per program ID, and to create the list of response data, It has a total processing means to process from the content of processing which searched the response data list created with the aforementioned response processing means from the aforementioned program information database based on program ID, and to obtain a total result.

[0014] According to this invention, the response data of the televiwer to the subprogram currently sponsored on both-directions television are sent to the concerned both-directions television response server system through a communication line network. In a both-directions television response server system, response data are arranged by the response processing means per program ID, and a response data list is created. While a response data list is passed to a total processing means, based on program ID of the response data registered into the response data list, the content of processing is searched from a program information database. Total processing of the concerned response data list is carried out from the searched content of processing, and a total result is obtained.

[0015] Both-directions television of a plurality [ this invention / corresponding to a claim 3 ] is connected through a communication line network. In the both-directions television response server system which processes the response data of the televiwer to the program currently sponsored on the aforementioned both-directions television according to the content of a program The program information database which registered the program information which defines program ID for every program and includes the content of processing of response data, The authentication information

database with which each people's authentication information was registered based on television ID defined for every both-directions television, A response processing means to create the response data list to which arranged the response data with which program ID and television ID which are sent from each aforementioned both-directions television were added per program ID, and response data and television ID were made to correspond, An authentication processing means to search the aforementioned authentication information database based on television ID registered into the aforementioned response data list, and to acquire an individual authentication information, It has a total processing means to process the aforementioned response data list and an individual authentication information according to the content of processing which searched the aforementioned program information database based on program ID, and to obtain a total result.

[0016] According to this invention, the response data of the viewer to the program currently sponsored on both-directions television are sent to the concerned both-directions television response server system through a communication line network. In a both-directions television response server system, the response data list to which response data are arranged by the response processing means per program ID, and television ID and response data were made to correspond is created. Based on television ID registered into the response data list by the authentication processing means, an authentication information is searched from an authentication information database, and a personal information is created. A response data list and a personal information are passed to a total processing means, based on program ID of the response data registered into the response data list, the content of processing is searched from a program information database, total processing of the concerned response data list and the personal information is carried out from the searched content of processing, and a total result is obtained.

[0017] Both-directions television of a plurality [ this invention / corresponding to a claim 4 ] is connected through a communication line network. In the both-directions television response server system which processes the response data of the viewer to the program currently sponsored on the aforementioned both-directions television according to the content of a program A communications control means to hold the communication line between these both-directions television if it is the HDR which analyzes the HDR added to the data sent through a communication line network from the aforementioned both-directions television, and demands two-way communication, While a program is sponsored on the aforementioned both-directions television through the communication line which the aforementioned communications control means holds, it has a program offer means to accumulate the response data sent from the aforementioned both-directions television through the aforementioned communication line to this program, and to execute business according to this program.

[0018] According to this invention, the data with which the both-directions HDR was added are transmitted to the concerned both-directions television response server system through a communication line network from both-directions television. By the both-directions television response server system, the HDR added to data is analyzed with a communications control means. If the HDR added to data is an HDR which demands two-way communication, a communication line will be maintained between these both-directions television, and this both-directions television will be provided with a program from a subprogram offer means through this circuit. Moreover, business according to this program is executed using the response data sent from both-directions television through a communication line to this program. VTR equipment whose this invention corresponding to a claim 5 reproduces the video signal by which the script which offers the additional information of goods was inserted in the predetermined field of the video signal which shows the content of goods, The television receiving set which receives the television Hertzian wave for a broadcast and displays a program, It is a both-directions television system with the bidirection built from the response server by which a line connection is carried out to this television receiving set through a public line. for the aforementioned television receiving set The video reception function to receive the video signal delivered from the aforementioned VTR equipment, The function which discriminates from a script from the video signal which the aforementioned reception function received, The remote-operation reception function to receive the signal transmitted from the remote-operation machine, and the function to judge the content of designation of the signal received by the remote-operation reception function, When the signal from a remote-operation machine is judged to have demanded offer of additional information, It has the script execution function which carries out response \*\*\*\*\* circuit sending out of the

transfer data corresponding to the additional information which performs the script from which it discriminated and was chosen with an identifier peculiar to a receiving set or a user individual. The database with which the personal information for a receiving set or a user individual was registered into the aforementioned response server, It has the function which takes out the identifier of a receiving set or a user individual from the transfer data sent from the aforementioned television receiving set, and the function to take out a personal information from the aforementioned authentication information database based on the identifier taken out from transfer data, and to perform predetermined processing.

[0019] According to the both-directions television system of this invention, the video signal by which the script which offers the additional information of goods was inserted in the predetermined field of the video signal which shows the content of goods in VTR equipment is reproduced. Therefore, a goods vendor etc. will provide a general home, a place of business, etc. with a video by creating and distributing the video which inserted in the video signal the script which embedded additional information, such as the purchase technique of goods, and the acquisition technique of a catalog.

[0020] If a video signal is given to a television receiving set from VTR equipment, it is discriminated from a script from a video signal, and when the signal transmitted from the remote-operation machine has demanded offer of additional information, the script from which it discriminated will be performed. Additional information required for a televiewer can be made to choose by performing a script. If additional information is chosen on a television receiving set, response \*\*\*\*\* circuit sending out of the transfer data corresponding to the additional information will be carried out with an identifier peculiar to a receiving set or a user individual.

[0021] In a response server, the identifier of a receiving set or a user individual is taken out from the transfer data sent from the television receiving set, a personal information is taken out from an authentication information database based on the identifier, and predetermined processing is performed.

[0022]

[Embodiments of the Invention] Hereafter, the gestalt of operation of this invention is explained.

[0023] (1st operation gestalt) View 1 shows the outline of a both-directions television response server system in which both-directions television was used. The function as a television receiver on which the TV program which the both-directions television 1-1 - 1-n receive the broadcast Hertzian wave from a broadcasting station, and was chosen is displayed, Subprograms, such as the orientation program of a character multiplexed and transmitted to a TV program using the predetermined field of a broadcast Hertzian wave, are separated from a broadcast Hertzian wave, and it has the function changed and displayed on a television signal, and the response function to receive and transmit the response data inputted by the televiewer to a program.

[0024] Connection of each both-directions television 1-1 - 1-n is attained through the public line network 4 to the response server 3. The response server 3 consists of two or more local response servers 5-1 - 5-m with which both-directions television of the predetermined area assigned beforehand, respectively is connected, and a center response server 6 which manages these local responses server. In addition, a local response server and a center response server can be treated as one response server, if it sees from the both-directions television 1-1 - 1-n. In a subsequent explanation, when there is no need of distinguishing both servers, suppose that it is only called the response server 3.

[0025] The broadcasting station 2, and the IP / SP business-firm server 7 are connected through wide area networks, such as WAN, to the response server 3. Both the broadcasting station 2, and the IP / SP business-firm server 7 can receive offer of data, such as a total result, from the response server 3. IP / SP business-firm server 7 is servers which the IP using manipulation data, such as a total result acquired by the response server 3, manages.

[0026] Drawing 2 shows the software configuration of the both-directions television 1 and the response server 3. The both-directions television 1-1 - 1-n are equipped with the program control section 8 which performs the program program by which the multiplex broadcasting was carried out from the broadcasting station 2. It notifies to the communications control section 9, the program control section 8 sponsoring the program according to the program selection demand of a televiewer, and using as response data the selections which the televiewer chose on the menu screen of the program. At this time, program ID of the concerned program and television ID of the concerned both-directions television are added to response data. Program ID is attached for each [ are provided on both-directions television ] program of every, and television ID is attached for every both-directions television 1-1 - 1-

n.

[0027] A response server 3 has the authentication processing application 13 which performs in authentication processing of a list creation etc. based on the response processing application 11 which creates the response data file 17 with the response data sent from both-directions television, the total processing application 12 which performs total processing based on the response data of the response data file 17, and a personal information, and the employment application 14 delete activation and the data which became unnecessary of applications 11-14 from a response data file 17 at the timing given from a scheduler.

[0028] The accessible program information database 15 and the authentication information database 16 are formed in the response server 3 from the response processing application 11, the total processing application 12, the authentication processing application 13, etc. Program ID of all programs which offers the program information database 15 on both-directions television is registered, and the required program information according to the content of a service of this program is stored for every program ID. The authentication information database 16 is made to correspond to television ID of all both-directions television registered, and personal informations, such as a name and the address, are registered.

[0029] Distributed TP monitor (distributed transaction process monitor) 20 is a fraction which supervises an operation of each above-mentioned applications 11-14, and guarantees the continuity of data. Moreover, the high-speed file system 21 is for accelerating processing speed while it intervenes between each above-mentioned applications 11-14, each above-mentioned databases 15 and 16, and the data files 17 and 18 and raises a reliability.

[0030] Connection which minds the public line network 4 for between the response server 3, and each both-directions television 1-1 - 1-n by the communications control section 30 is enabled. The communications control section 30 controls the line connection of predetermined both-directions television and the modem 32 by the communications control protocol 31, and has connected to the response server 3 both-directions television which carried out the line connection to the modem 32 through a communications protocol 33. The communications control section 30 is connected to the response server 3 through I/O control unit 34. I/O control unit 34 is for processing transfer of the data between the response servers 3 efficiently.

[0031] As for drawing 3, the example of a configuration of the program information database 15 is shown.

[0032] The program information database 15 about the program "which receives a reply of a televiewer on both-directions television in a quiz show, and notifies the result which totaled the reply of a televiewer to a broadcasting station 2" is shown. Program ID of the concerned program, the broadcasting hours of a quiz show, the content of response processing, the content of total processing, the sending-out type of a total result, etc. are set to the program information database 15.

[0033] As for drawing 4, the example of a configuration of the authentication information database 16 is shown.

[0034] It is made to correspond to television ID and the owner name of the concerned both-directions television, the connection address, and other arbitrary attribute data are defined as an authentication information.

[0035] Drawing 6 shows the example of a system configuration for carrying out the interconnection of the both-directions television 1-1 - 1-n, the broadcasting station 2, the response server 3, and the IP / SP business-firm server 7.

[0036] As described above, the both-directions television 1-1 - 1-n are connected to the communications control section 30 through the public line network 4 and a modem. When the response server 3 arranges this communications control section 30 on LAN35 connected, connection between both-directions television and a response server is made. It connects with WAN37 through a router 36 from LAN35, and has connected with broadcasting station terminal 2' through a router 38 from WAN37. Moreover, it has connected also with IP / SP business-firm server 7 from WAN37.

[0037] Next, an operation of the both-directions television response server system constituted as mentioned above is explained with reference to the drawing 7 and the drawing 8. The drawing 7 and the drawing 8 show the case where total a reply of a televiewer by the response server 3 by the quiz show, and it notifies to a broadcasting station 2.

- [0038] It transmits to the both-directions television 1-1 - 1-n, using as program data the screen image and program as which put on the broadcast Hertzian wave of a quiz show from a broadcasting station 2, and a televiewer is made to choose the selection problem of quiz. Program ID is added to this data.
- [0039] In the both-directions television 1-1 - 1-n, the program of the selection problem separated from the broadcast Hertzian wave of a quiz show is notified to the program control section 8. In the program control section 8, if the demand on which the program of a selection problem is displayed is received from a televiewer through the user interface by remote control etc., the selection menu about a selection problem will be displayed on a television screen. These program informations are inserted and sent to the opening between broadcast Hertzian waves. And the reply which the televiewer inputted to the selection menu is used as response data, program ID and television ID are added to these response data, and the communications control section 9 is passed. The communications control section 9 gives a demand of a line connection from the both-directions television 1 to the communications control section 30 through the public line network 4. Program ID, television ID, and response data are sent from the both-directions television 1 after the communications control section 9 and the line connection between 30 at the response server 3.
- [0040] In the response server 3, the received response data are passed to the response processing application 11 from I/O control unit 34. The communications control section 30 cuts a circuit, after passing response data to the response processing application 11.
- [0041] The response processing application 11 performs processing which uses as a key program ID added to response data, reads the content of response processing of the concerned program from the program information database 15, and was shown in the content of response processing. The file of corresponding program ID which is shown in drawing 5 from the response data file 17 is specifically searched, and television ID and response data (reply) are set. By performing same processing to all replies, the list which becomes the response data file shown in drawing 5 from television ID and response data to the concerned selection problem is created. In addition, if there is no applicable program ID, program ID will newly be registered.
- [0042] The authentication processing database 16 is searched based on television ID which the authentication processing application 13 was started and was registered into the response data squirrel by it when it was specified to be a response data list by the program information database to add the individual authentication information corresponding to television ID. An individual authentication information is created from the reference result.
- [0043] The total processing application 12 reads the content of total processing over the concerned program from the program information database 15 based on program ID. Here, since it is the reply total to the selection problem of quiz, program ID is used as a key from the response data file 17 which the response processing application 11 created, and response data (reply) are taken out and it totals. Moreover, if total processing which incorporated the individual authentication information is specified to be the content of total processing, the total result which combined the response data list and the individual authentication information will be obtained. This total result is outputted with the gestalt according to the sending-out type registered into the program information database 15. When using the total result of a reply in a TV program, "real-time sending" is specified at the broadcasting station 2. The communication line between the response server 3 and broadcasting station terminal 2' is connected, and a total result is transmitted to broadcasting station terminal 2' through WAN37.
- [0044] Although the above explanation showed the example which totals a reply of a televiewer by the quiz show, the content of a program can be freely set up with the combination of the content of a program multiplexed on a broadcast Hertzian wave from a broadcasting station 2, and the program information beforehand stored in the program information database 15 corresponding to the program.
- [0045] For example, the service which performs the catalog claim of goods which is carrying out the commercial broadcast on both-directions television can be offered. The screen image for charging a goods catalog is multiplexed on a broadcast Hertzian wave with program ID, and it transmits to a commercial broadcasting-hours band at both-directions television.
- [0046] In both television which received the data of a catalog claim screen, a catalog claim screen is displayed on a screen by the display demand inputted through a user interface from a televiewer. And the selection action which the televiewer performed to the catalog claim screen is done response data, and it transmits to the response server 3 with program ID and television ID.

[0047] The program information over the concerned catalog claim is beforehand registered into the program information database 15 of the response server 3 with program ID, and the total processing application 12 performs total processing required for a catalog claim based on program ID. Personal informations, such as a name of the individual who performed the catalog claim from the authentication information database 16 based on television ID, and the address, are specifically extracted, and the catalog claim list to which the class and the receiver's address of the catalog currently charged from this personal information and program ID were made to correspond is created. Since it is not necessary to transmit to IP / SP business firm on real time, a catalog claim list creates the total data file 18, accumulates the catalog claim list, and can transmit it to the server 7 of IP / SP person who has contracted by batch processing. When transmitting a catalog claim list by batch processing, it is specified as "batch processing" at the sending-out type item of the program information database 15. Moreover, when there is a transmission demand to the response server 3 from the broadcasting station 2, or the IP / SP business-firm server 7 and it transmits a catalog claim list collectively, it is specified as "on demand" in the sending-out type item of the program information database 15.

[0048] By some intended use, it prints out the total result acquired by the total processing application 12 of the response server 3 by the response server 3, or it not only transmits it to others, but displays it on CRT.

[0049] In addition, the list creation work with the need of processing a personal information like a catalog claim list can be passed to the authentication processing application 13. If it is the above-mentioned example, a television ID information is given to the authentication processing application 13 from the total processing application 12, and the authentication processing application 13 is made to create a catalog claim list.

[0050] Thus, according to this operation gestalt, carry out the selection display of the program on both-directions television 1 which received the broadcast Hertzian wave which multiplexed the program, and a viewer's response is received. It transmits to the response server 3 with program ID and television ID, using the selection input as response data. Since response data were response-processed and total processed with reference to the program information beforehand set to the response server 3 corresponding to the content of a program of each program A TV program or the arbitrary programs relevant to broadcast commercials can be displayed on both-directions television, a viewer's selection inputs can be collected as response data, and information offer of the manipulation to the collected response data according to the content of a program can be added and carried out.

[0051] Since according to this operation gestalt the authentication information database 16 of the response server 3 was made to correspond to each television ID of the both-directions television 1-1 - 1-n and the personal information was registered beforehand, the manipulation data which seasoned with the personal information the response data collected from each both-directions television 1-1 - 1-n can be created, and the various lists for which a personal information is needed can be created easily.

[0052] In addition, in the above-mentioned operation gestalt, a TV program or the program irrelevant to broadcast commercials is displayed, and it may be made to collect as a viewer's response data from both-directions television.

[0053] (2nd operation gestalt) The system configuration and software configuration with the fundamental both-directions television response server system of this operation gestalt are the same as that of the 1st operation gestalt mentioned above.

[0054] With this operation gestalt, only the program start menu used as the selection screen at the time of program start is multiplexed by the broadcast Hertzian wave, and is sent to both-directions television, and a program is sponsored after program start from a response server side (application arranged at the response server itself or other servers). By I/O control unit 34 of the response server 3, an identifiable HDR is attached and the both-directions television 1-1 - 1-n transmit while they add program ID and television ID to a viewer's response data. An HDR serves as the identifier for passing the concerned response data to the online service manager 19.

[0055] The online service manager 19 has the function to specify the application which should search the program information database 15 and should connect based on program ID added to response data. the program information on program ID applicable to the program information database 15 -- a connection place -- an application -- the information is set

[0056] An operation of the both-directions television response server system concerning this operation

gestalt is explained with reference to the drawing 9 and the drawing 10.

[0057] During a commercial broadcast, program start menus, such as on-line shopping or a catalog claim, are multiplexed by the broadcast Hertzian wave, and are sent at the both-directions television 1-1 - 1-n. In the both-directions television 1-1 - 1-n, if a display demand is received from a televiewer through a user interface, a program start menu will be displayed. It shifts independently to an online service with a response server with a broadcast after this. If there is a program start demand to a program start menu on both-directions television, a both-directions HDR will be added to the response data used as program start demand operation, program ID, and television ID, and it will be transmitted to the response server 3 from the communications control section 9 of both-directions television.

[0058] In I/O control unit 34 of the response server 3, if the both-directions HDR is added to response data, the concerned data will be passed to the online service manager 19, and connection of a communication line will be maintained. the online service manager 19 -- program ID -- a key -- carrying out -- the connection from the program information database 15 -- an application -- an information is read and the application specified there is started When the application 41 arranged in the response server 3 is specified, application 41 transmits to both-directions television of picture image image and program program according to content of program demand origin through the public line network 4.

[0059] If a televiewer performs selection operation through a user interface while the program control section 8 of both-directions television performs program informations, such as a picture image image and a program program, it sends out to the response server 3 with program ID and television ID, using the content of selection operation as response data. The application 41 which received this response data transmits the picture image image and program for shifting to the following processing to both-directions television. Similarly, a shopping procedure and a catalog claim procedure are completed by repeating an exchange for response data, a picture image image, etc. In addition, if it is the easy content of a procedure, a procedure will be completed only by 1 time of response data.

[0060] moreover, the connection which the online service manager 19 used program ID as the key, and read from the program information database 15 -- an application -- when the application specified to be an information is not arranged at the response server 3, it connects with the server 40-1 (40-2) by which the concerned specification application is arranged The address information for connecting with a server 40-1 (40-2) shall be set to the program information database 15.

[0061] For example, when the application 42 arranged at the server 40-1 is specified, the response server 3 is connected to a server 40-1 through a high-speed digital line network, and activation is applied to application 42. And a picture image image etc. is transmitted to the both-directions television 1 through the response server 3 from application 42. Procedures, such as on-line shopping and a catalog claim, can be delivered to a goods offer contractor as they are by arranging applications 42 and 43 to the server 40-1 which a goods offer contractor manages, and 40-2.

[0062] Thus, according to this operation gestalt, a program start menu is multiplexed and broadcast on a broadcast Hertzian wave from a broadcasting station 2. Add response data, program ID, television ID, and a both-directions HDR on both-directions television, and it transmits to the response server 3. Since the picture image image and the program were transmitted to both-directions television by the response server 3 course from the application arranged at the response server 3 or other servers Only by sending only a program start menu to both-directions television from a broadcasting station 2 first, the application by the side of the response server 3 can offer the procedure after it. Therefore, the on-line shopping and the catalog claim using both-directions television are attained, without increasing the load of a broadcast Hertzian wave. Moreover, it can make it possible to choose the program start menu of the goods relevant to the commercials and TV program under broadcast on both-directions television.

[0063] In addition, if it is a program start menu irrelevant to the commercials and TV program under broadcast, it memorizes beforehand and can make it possible to always display a program start menu on ROM of both-directions television, although the program start menu is sent to both-directions television from the broadcasting station 2 with the 2nd above-mentioned operation gestalt.

[0064] (3rd operation gestalt) View 11 and the drawing 12 show the example which changed a part of 2nd above-mentioned operation gestalt. this operation gestalt -- the storage top of both-directions television -- the offer service menu from a server side -- beforehand -- memorizing -- a televiewer -- a both-directions television top -- a service -- selection \*\*\*\* -- it is the example made like Here, the

service with which both-directions television is provided from a server side can be treated as one gestalt of a program like the operation gestalt of the above 2nd.

[0065] The both-directions television 1 will display the menu memorized beforehand on storages, such as ROM, if a display demand of an offer service menu is received from a televiewer. If a televiewer does the selection input of the offer service using a menu, the HDR which requires two-way communication of the data used as start demand operation, service ID, and television ID will be added, and it will be transmitted to the response server 3 from the communications control section 9 of both-directions television. Service ID is registered into the change of program ID at the program information database. Subsequent processing is the same as that of the operation gestalt of the above 2nd.

[0066] According to such this operation gestalt, regardless of a broadcast of a broadcasting station, the on-line shopping by both-directions television, a catalog claim, etc. can be performed.

[0067] (4th operation gestalt) The 4th operation gestalt is the both-directions television system which enabled it to perform an acquisition of order of goods, a catalog, etc., and an informational acquisition by reproducing picture recording of the goods explanation video which inserted the program which connects VTR equipment to both-directions television, and is equivalent to the above-mentioned subprogram with VTR equipment, and providing for both-directions television as a program information.

[0068] Drawing 13 is a conceptual diagram of the both-directions television system concerning the 4th operation gestalt, and shows the detail drawing of this both-directions television system in drawing 14. The VTR equipment 50 is installed in the on-line connectable location to the both-directions television 60. A goods vendor etc. plays the video which was sold or distributed and which is mentioned later with this VTR equipment 50. The interior of the VTR equipment 50 consists of a script regenerative circuit 53 which reproduces the information on the goods embedded in the image-reconstruction circuit 52, the script, and script which reproduce a picture signal from the signal read by the video head 51 which reproduces a video signal, and the video head 51.

[0069] From the VTR equipment 50, the script (and picture image control information) by which the information on goods was embedded within the vertical-blanking term (VBL) of image information is transmitted. In addition, the whole bit stream for the additional information display transmitted in the character multiple-signal transmission term in VBL is only called the script except for control information in part here. Therefore, an HDR, a form, a resource, and the program section are contained in the script.

[0070] In addition to the video picture image acquired for the video receiving set for teletext 61 (character multiplex video receiving set) and the character multiplex video receiving set 61 which receive the video signal to which the both-directions television 60 is sent from the VTR equipment 50, usual \*\*\*\*\* obtained by the multimedia teletext receiving circuit 63 is equipped with the display (CRT) 62 which carries out the display output of the both-directions teletext alternatively. Moreover, the both-directions television 60 discriminates from it and incorporates an alphabetic data (VBL data), divides it into the data of usual image information, and the data of two or more sorts of additional information relevant to image information from the video signal passed from the character multiplex video receiving set 61, and is equipped with the multimedia teletext receiving circuit 63 which generates the indicative data of usual image information, and the indicative data of two or more sorts of additional information relevant to image information. This multimedia teletext receiving circuit 63 interprets and performs a receiving script, supplies the picture processing circuit of the character multiplex video receiving set 61 about the display information in it, and supplies a modem 64 about the information which carries out circuit sending out to the response server 3. A modem 64 carries out the line connection of the multimedia teletext receiving circuit 63 to a dial up line. The data treated by the multimedia teletext receiving circuit 63 are automatic-dialed to the line connection (embedded in receiving script) point (for example, response server 3) given to this modem 64 from the decoding section for both-directions teletext of this receiving circuit 63, and it transmits. That is, it can call to the line connection point (for example, response server 3) given from the decoding section for both-directions teletext automatically, being able to use as a sending agency the information registered into the registration setting section [PS] of the device management and identification information on ROM mentioned later through the modem 64 by specific key input operation of the remote control operation machine 65.

[0071] The response server 3 has equipped the same function as the above-mentioned gestalt of one of

operations fundamentally. That is, it has the CCP facility 71 transmitted and received with the multimedia teletext receiving circuit 63 of each television 60 for the both-directions television 60 in many general homes. The response server facility 72 put on the bottom of the pin center, large server facility mentioned later carries out distributed processing of the transceiver information for much both-directions television 60. [ two or more ] It enables it to access to the local database (L-DB) 73 which accumulated the personal information on the predetermined area for a subscriber management of these responses server facility 72. The pin center, large server facility 74 is a server which carries out total processing of the result by which distributed processing was carried out by each response server facility 72, and has the master database (M-DB) 75 which accumulated the personal information on all the areas for a subscriber management. IP / SP facility 77 is fractions returned to a network service 7 in the type where receive beforehand the processing designation to the response data from the both-directions television 60 from a network service 7, and a network service 7 wishes for the response result of \*\* and the both-directions television 60. The operational-administrative facility 76 is the application for carrying out the operational administrative of the response server system which consists of each above-mentioned facility.

[0072] Here, the internal configuration of the multimedia teletext receiving circuit 63 is explained. Drawing 15 shows functional block inside the multimedia teletext receiving circuit 63. The multimedia teletext receiving circuit 63 has managed the motion control inside a circuit by CPU81. Here, since the processor of the script for offering two or more sorts of additional information relevant to image information is made, the decoder section for both-directions teletext is realized by performing processing of the script processing module in ROM which this CPU81 mentions later [SCR].

[0073] The video signal inputted from the video receiving set 61 is memorized to RAM83 through the waveform-equalization data separation processing circuit 82. From the video signal (Video) received for the character multiplex video receiving set 61, the waveform-equalization data separation processing circuit 82 discriminates from the data for teletexts, and the data for both-directions teletexts (namely, script for an additional information display), and stores the data for a received-character broadcast, and a receiving script in RAM83 under a control of CPU81. The buffer (storage) of the receiving script between which it discriminated from the video signal (Video) is carried out to RAM83, it is interpreted, is performed, and each processing of generating an indicative data (RGB code) is performed.

[0074] RAM83 is used as work memory of CPU81, and a data-communication-control program [DCOM] drawing processing program [PICM] user interface program [USIF], the script buffer section [SCB], the data buffer section for teletexts, etc. are prepared.

[0075] The primary control program and constant which CPU81 performs are stored in ROM84. a script -- processing -- performing -- a sake -- a script -- processing -- a module -- [ -- SCR -- ] -- a teletext -- processing -- performing -- a sake -- a teletext -- processing -- a module -- [ -- CBP -- ] -- etc. etc. -- storing -- having -- while -- a receiving set -- every -- numbering -- having had -- a device -- being peculiar -- ID -- identification -- ID -- etc. etc. -- registering -- having -- a device -- a management -- -- identification -- an information -- registration

[0076] The indicative data is stored in the memory (VRAM) for a display 85. For example, the data for a display by which drawing processing was carried out with the drawing processing program [PICM] are stored.

[0077] The signal from the television receiving circuit with which the both-directions television 60 is equipped is given to the microprocessor for a channel selection 86 (channel-selection MP). The signal from the remote control operation machine 65 is received, it separates into the command for television operation, and the command for additional information display selection controls, and channel-selection MP86 delivers the command for television operation to a television receiving circuit, saves the command for additional information display selection controls at the buffer register for a remote control reception of RAM83, and delivers it to CPU81 by bit parallel.

[0078] The block diagram of the remote control operation machine 65 which operates the both-directions television 60 by remote control is shown in drawing 16. The remote control operation machine 65 has an orientation designation key (it is one each to the orientation of four directions), a decision (defined) key, etc. for choosing arbitrary selection branches from two or more selection branches prepared in the mode change key (i key) which changes the interactive mode effectively/invalid, the additional information selection screen, etc. In addition, effective/invalid in the

interactive mode are the keys of the toggle formula which changes by turns, and the above-mentioned mode change key (i key) displays "i" mark on the upper-left corner of a display (CRT), when the interactive mode is set up effectively. \*\* and channel-selection MP86 are reflected only in the additional information which the key (for example, numerical keypad) of - section is displaying when the interactive mode is effective (namely, when "i" mark is displayed). Not only operation of the remote control operation machine 65 but the thing effectively set up to the timing which exists compulsorily in a specific additional information display according to the command embedded in the script is also possible for the effective/invalid setup in \*\* and the in \*\*\*\*\* tape mode.

[0079] The contractor who performs goods sale etc. using the above both-directions television systems creates the video which embedded the receiving methods, such as order of the concerned goods and a catalog, etc. in the type of a script at the video signal while he takes a photograph of the video picture (voice is included) which introduces goods.

[0080] Drawing 17 records the picture of goods on videotape, and shows the system which superimposes the alphabetic data (VBL data) about the picture and goods. The picture of goods is recorded on videotape with the picture-recording equipment 91, and the alphabetic data containing the script where the information about goods was embedded with the alphabetic-data work equipment 92 is generated. The alphabetic data containing the script created with the alphabetic-data work equipment 92 is transmitted to the multiplexing equipment 94 through the sending-out control unit 93. The sending-out control unit 93 is controlling the alphabetic transmit (VBL data transmission) containing a script. The predetermined field of a video signal is made to multiplex the alphabetic data containing a script in the multiplexing equipment 94, taking the video signal from the picture-recording equipment 91, and a synchronization. Thus, the video by which the script was embedded is created. Informations, such as an information with the destination, are embedded in the script.

[0081] An example of the procedure in a both-directions television system is shown in drawing 18. With reference to this drawing, shopping by the video is explained below for an example.

[0082] In a step (1), the VTR equipment 50 is connected to the both-directions television 60, and the video by which the script created by the above-mentioned picture-recording system was embedded is played with the VTR equipment 50. From the VTR equipment 50, the script (and screen control information) by which the information on goods was embedded in VBL of image information is transmitted.

[0083] Drawing 19 is the even-number field of the video signal reproduced with the VTR equipment 50, and an odd number field, and the transmission timing of a script (and screen control information) is shown. VBL inner-drainage common scanning interval (present character multiple signal) for transmitting the usual data for teletexts -- in addition, the script (and screen control information) is transmitted using VBL inner-drainage common scanning interval shown by sign c in drawing

[0084] The video signal [ script ] for teletext (coding transmission-system teletext) which embedded and embedded the destination information (for example, telephone number) in VBL at the script with the transmission gestalt shown in drawing 19 by processing of a step (1) is transmitted. Here, the telephone number embedded in the script (the script book soma (program section) which described procedure, an HDR, a form, and a resource are included) for offering two or more sorts of additional information linked with image information within the vertical-blanking term (VBL) contained in a video signal, and the script is transmitted. The shopping information by VTR shall be transmitted with the customer telephone number as an example.

[0085] By the step (2), the both-directions television 60 receives the video signal in which the shopping information reproduced with the above-mentioned VTR is inserted, and memorizes the receiving script contained in the signal (buffer). Namely, the multimedia teletext receiving circuit 63 prepared in the both-directions television 60 discriminates from them and incorporates VBL data from the sent video signal, divides them into two or more sorts of additional information linked with the data of usual image information, and image information, generates the indicative data of usual image information, and the indicative data of two or more sorts of additional information linked with image information, and memorizes them in RAM83, respectively (buffer).

[0086] If a televiewer operates the mode change key (i key) of the remote control operation machine 65 and confirms the interactive mode in a step (3), it will check whether "i" mark which is shown in drawing 20 (a) in a upper-left corner of a display (CRT) 62 is displayed, the screen which displays that it is the

interactive mode and shows it in drawing 20 (b) further is displayed, and \*\*\*\*\* is carried out. [0087] Furthermore, in connection with operation of the above-mentioned mode change key (i key), an additional information selection screen (shopping selection screen) which is execution of script processing by the decoder section for both-directions teletext realized by CPU81 performing processing of the script processing module in ROM84 [SCR], for example, is shown in drawing 21 (a) is displayed (step (4)).

[0088] On this additional information selection screen (shopping selection screen), when a televiewer operates the orientation designation key (a leftward designation key and \*\* are a rightward designation key here) of the remote control operation machine 65, highlighting (for example, \*\*\*\* display) of (a step (5)) and the selection branch by which selection specification was carried out is carried out, and a specification selection branch is specified (step (6)). If "decision" (defined) key is operated in the status that highlighting (\*\*\*\* display) of the selection branch which carries out shopping is carried out at this time, an introduction and a selection screen of a shopping information which are shown in drawing 21 (b) will be displayed (a step (5), (6)).

[0089] Furthermore, if a screen which shows the dealings detailed \*\* in the drawing 22 (a) which served as authentication of a goods detail etc. will be displayed if selection specification of a certain goods is carried out on an introduction and selection screen of the shopping information shown in this drawing 21 (b), and "a correction" is chosen on this screen, it will return to the screen of drawing 21 (b). On the screen where \*\* and dealings detailed \*\* shown in above-mentioned view 22 (a) served both as a goods detail and authentication, if "authentication (order)" is chosen (step (7)), the dealings information will be automatically transmitted by the response server 3 on the basis of the modem 64 and the customer telephone number which received through the telephone line (step (8)). At this time, the screen in which the purport which is [ dealings / which are shown in drawing 22 (b) ] under processing is shown is displayed.

[0090] If the response server 3 receives a dealings information from the both-directions television 60, device ID \*\* contained in the information will search the local database 73 according to identification ID, will perform authentication processing and registration processing in which the concerned content of dealings is followed, and when dealings are materialized, it will return them to the both-directions television 60 with dealings of the information which shows the purport.

[0091] If a dealings formation information is received from the response server 3 through a modem 64, a screen which is shown in drawing 22 (b) according to the content of an information will be expressed as the both-directions television 60. Since the video signal by which the script was embedded on both-directions television 60 using the VTR equipment 50 which has spread through a general home etc. widely can be given according to such operation gestalt, a bidirection service of on-line shopping etc. can be offered by the 3rd technique which it is not from a broadcasting station or a server, either.

[0092] In addition, although only the single shopping information was illustrated with the 4th operation gestalt, it is also possible to cover jewelry, food, garments, real estate, etc. about shopping, to be able to carry out two or more sorts dealings service, to change the telephone number by by industrial classification and the contractor etc., and to transmit automatically to each, for example. In this case, when two or more telephone numbers separately set as the transmitting script by the type of industry and the contractor etc. are embedded and dealings are decided by the both-directions television 60 side, the dealings service using two or more telephone lines is realized by sending out the telephone number by the type of industry applicable to the content of dealings, and the contractor to a modem 64.

[0093] Moreover, it is also possible the remote control operation machine 65 and to call to the line connection point registered into the registration setting section [PS] of the device management and identification information on ROM84 through the modem 65 automatically by the specific key stroke input.

[0094] Deformation implementation is variously possible for this invention within limits which are not limited to the above-mentioned operation gestalt and do not deviate from the summary of this invention.

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[Translation done.]

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2.\*\*\*\*\* shows the word which can not be translated.

3.In the drawings, any words are not translated.

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Effect

0095 } [Effect of the Invention] As a full account was given above, according to this invention, the both-directions television response server system which can be offered to the broadcasting station where a viewer does total processing of the response data which carry out a selection input according to the content of a program, and needs the concerned total result on both-directions television can be offered. According to this invention, the both-directions television system which can offer the service which displayed the additional information of goods on the television receiving set which displayed the video signal reproduced with VTR equipment, and followed additional information can be offered.

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[Translation done.]

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DESCRIPTION OF DRAWINGS

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## [Brief Description of the Drawings]

- [Drawing 1] It is drawing showing the outline of the both-directions television response server system concerning the 1st operation gestalt of this invention.
- [Drawing 2] It is drawing showing the software configuration of the both-directions television response server system concerning the 1st operation gestalt.
- [Drawing 3] It is drawing showing the example of a configuration of the program information database with which the both-directions television response server system was equipped.
- [Drawing 4] It is drawing showing the example of a configuration of the authentication information database with which the both-directions television response server system was equipped.
- [Drawing 5] It is drawing showing the example of a configuration of the response data file in a both-directions television response server system.
- [Drawing 6] It is drawing showing the system configuration of the both-directions television response server system concerning the 1st operation gestalt.
- [Drawing 7] It is drawing showing the data flow between the broadcasting station and both-directions television in the 1st operation gestalt, and a response server.
- [Drawing 8] It is drawing showing the content of processing in the response server in the 1st operation gestalt.
- [Drawing 9] It is drawing showing the data flow between the broadcasting station and both-directions television in the 2nd operation gestalt, and a response server.
- [Drawing 10] It is drawing showing the content of processing in the response server in the 2nd operation gestalt.
- [Drawing 11] It is drawing showing the data flow between both-directions television in the 3rd operation gestalt, and a response server.
- [Drawing 12] It is drawing showing the content of processing in the 3rd both-directions television in the operation gestalt and response server.
- [Drawing 13] It is the conceptual diagram of the both-directions television system concerning the 4th operation gestalt.
- [Drawing 14] It is the functional block diagram of the both-directions television system concerning the 4th operation gestalt.
- [Drawing 15] It is the functional block diagram of the teletext receiving circuit with which the 4th operation gestalt was equipped.
- [Drawing 16] It is the plan of a remote control operation machine.
- [Drawing 17] It is a picture-recording structure-of-a-system view in the 4th operation gestalt.
- [Drawing 18] It is drawing showing the procedure in the 4th operation gestalt.
- [Drawing 19] It is drawing showing the transmission gestalt of the video signal delivered from VTR equipment in the 4th operation gestalt.
- [Drawing 20] It is a screen block diagram when choosing the interactive mode in the 4th operation gestalt, and is \*\*.
- [Drawing 21] It is the screen block diagram of the additional information selection screen in the 4th operation gestalt.
- [Drawing 22] It is the screen block diagram of other additional information selection screens in the 4th

operation gestalt.

[Description of Notations]

1-1 - 1-n, 60 [ -- Response server, ] -- Both-directions television, 2 -- A broadcasting station, 3 4 [ -- Program control section, ] -- A public line network, 7 -- IP / SP business-firm server, 8 11 -- Response processing application, 12 -- Total processing application, 13 [ -- Program information database, ] -- Authentication processing application, 14 -- Employment application, 15 16 [ -- A total data file, 19 / -- An online stream manager, 30 / -- The communications control section, 34 / -- TP client, 60 / -- VTR equipment. ] -- An authentication information database, 17 -- A response data file, 18

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[Translation done.]